



**Advanced Card Systems Ltd.**  
Card & Reader Technologies

# APG8202 PINhandy 2 OTP Generator



Technical Specifications



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## 1.0. Introduction



As technology becomes more and more sophisticated, fraud related incidents in the banking sector become more prevalent. These occurrences generate billions of dollars worth of losses and bring distress among credit and debit cardholders. Because of this, certain security measures and systems are employed. In this regard, the APG8202 PINhandy 2 OTP Generator is a reliable tool that can be utilized to fight these occurrences.

### ***What is APG8202 PINhandy 2?***

APG8202 PINhandy 2 is a portable and cost-efficient smart card device which operates on a purely standalone mode to perform authentication for various applications. It is capable of managing One Time Passwords, and Challenge-Response Authentication Codes based on the security keys stored in the EMV cards.

### ***How does APG8202 PINhandy 2 work?***

APG8202 PINhandy 2 uses a two-level authentication process requiring cardholders to insert their EMV cards into their respective devices and enter their PIN code using APG8202's built-in PIN-pad. Following successful verification of both the card and PIN code, it generates a dynamic one-time password that can only be used once to securely perform several transactions like online shopping, banking logons and telephone orders.

### ***Why is APG8202 PINhandy 2 secure?***

APG8202 PINhandy 2 is compliant with major banking, computing and safety standards such as Mastercard® Chip Authentication Program (CAP), Mastercard® PIN-/Perso-less Authentication (PLA), VISA Dynamic Passcode Authentication (DPA) and EMV Level 1. It is specially designed to safeguard users from emerging fraud attacks like Card-not-Present (CNP) fraud and Man-in-the-Middle attacks, and to provide proof that a card is present during an OTP generation process.

Further, APG8202 PINhandy 2 operates on a purely standalone mode and does not have to be connected to separate devices like PC's. Because of this, exposure of sensitive information in the card is limited to the device, making it impossible for them to be hacked or stolen.

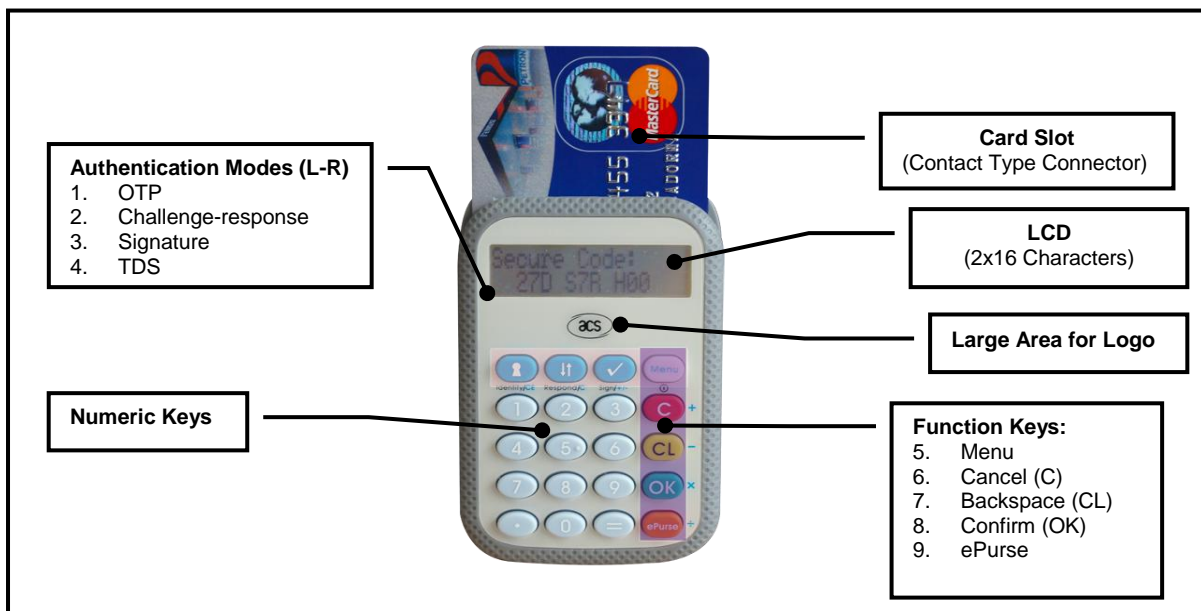
### ***How can APG8202 PINhandy 2 help you save money?***

Banks can now efficiently distribute APG8202 PINhandy 2 to individual customers in bulk/volume without worrying about sensitive data handling. More importantly, complicated device issuance or re-issuance strategies are no longer needed, hence the overall implementation cost is lowered. Finally, since APG8202 is a standalone device, it does not require specialized programming or software installation to work.



## 2.0. Features

- Standalone Mode
- Support for OTP (One Time Password), and Challenge-Response Modes
- 2 CR2032 Batteries
- Intelligent Battery Management for a Life Expectancy of 5 years (depending on usage)
- Full-Sized Microprocessor Cards (T=0, T=1 Protocols) Support
- ISO-7816 Class A cards Support
- Acceptance for Semi-insertion of Cards
- PPS (Protocol and Parameters Selection) Support
- Durable Tactile Keypad with 20 Silicon Rubber Keys
- Graphical LCD for Showing Logo and Multiple-language Characters
- Monotone Buzzer
- Value-Added Calculator and ePurse Function
- Tamper Indication Seal to Indicate Unauthorized Intrusion
- Handheld Device with Compact and Portable Design
- Short Circuit Protection
- MasterCard® Chip Authentication Program (CAP)
- MasterCard® PIN/Perso-less Authentication (PLA)
- VISA Dynamic Passcode Authentication (DPA)
- UK APACS
- EMV Level 1
- CE
- FCC
- RoHS
- ISO 7816





### 3.0. Typical Applications

- e-Banking
- e-Payment
- Dynamic One-Time Password
- Remote Authentication
- Digital Signature





## 4.0. Technical Specifications

### Power Supply

Supply Voltage ..... Standalone Mode: 2 x CR2032 Batteries (Replaceable)

### Smart Card Interface

Standard..... ISO 7816 Class A (5V), T=0 and T=1  
 Supply Current..... Max. 50mA  
 Smart Card Read / Write Speed ..... 1743 – 250,000 bps  
 Short Circuit Protection ..... +5V / GND on all pins  
 Clk Frequency ..... 2 MHz  
 Card Connector ..... Contact  
 Card Insertion Cycles ..... Min. 100,000

### Human Interface

Keypad ..... 20 Keys  
 LCD Display ..... Graphical LCD for Logos and Multiple-language Characters  
 ..... (1 line for 6 Chinese/16 alphanumeric characters, 128x24 pixels)  
 Tamper Evidence ..... Tamper Indication Seal beneath Screw  
 Buzzer ..... Monotone Buzzer

### Physical Specifications

Case Color ..... White  
 Dimensions..... 95.00mm (L) x 60.00mm (W) x 11.00mm (H)  
 Weight ..... 49g (with Batteries)

### Operating Conditions

Temperature..... 0°C to 50°C  
 Humidity ..... 40% to 80%, Non-condensing

### Compliance/Certifications

MasterCard® CAP, MasterCard® PLA, Visa DPA, EMV Level 1, CE, FCC, RoHS, ISO 7816,



### Other Features

Other Features ..... Built-in calculator function, ePurse